WHITE PINE BLISTER RUST CONTROL
NORTHEASTERN AREA - STATE AND PRIVATE FORESTRY
U. S. FOREST SERVICE
FISCAL YEAR - 1966

Since the 1965 Region 7 Fiscal Year White Pine Blister Rust Control Report was issued, there has been a big organizational change within the U. S. Forest Service. Our old Region 7 is no more. As of February 13, 1966, Region 7 was abolished. In its place we now have the new Northeastern Area of State and Private Forestry. Of the 14 States comprising old Region 7, two States, Virginia and Kentucky, were incorporated with Region 8. To the 12 remaining States, 8 more were added, making the Northeastern Area a large area of 20 States. Under the National Forest Administration the White Mountain, Green Mountain, Allegheny and Monongahela National Forests are now incorporated with Region 9, with headquarters in Milwaukee, Wisconsin. This brings the total number of National Forests in Region 9 to 15.

Organization and Personnel

Under the new Northeastern Area of State and Private Forestry, the Division of Insect and Disease Control is divided into two Branches, namely, the Branch of Entomology and the Branch of Pathology, the latter including Blister Rust Control. The Division now has three Zone offices located at Amherst, Massachusetts, Delaware, Ohio and Milwaukee, Wisconsin. The Amherst Zone under the leadership of Mr. M. R. Mulholland, takes in the New England States as well as the State of New York and New Jersey. The Zone is now staffed with three Entomologists, one Forestry Aid, one Blister Rust Area Leader, three field Blister Rust Control Leaders, and one Clerk-Typist. The Pathologist position vacated by Mr. Tegethoff has not as yet been filled. Mr. Mulholland administers the BRC program in the Zone.

The old Southern Zone was moved to Delaware, Ohio, the last week of June. Zone Leader, John R. George, was transferred to Washington, D. C., under a new duty assignment in the Division of Forest Pest Control. Mr. W. L. Freeman has been assigned Zone Leader with headquarters located at the Insect and Disease Laboratory, Northeastern Forest Experiment Station, Delaware, Ohio. The old Southern Zone is now known as the Delaware, Ohio Zone. The States administered from this Zone are Pennsylvania, Delaware, Maryland, West Virginia, Ohio, Indiana, Illinois, and Missouri. At the present time the Zone is staffed with two Entomologists, including Zone Leader Freeman, one Forester, one Forestry Aid and one Clerk-Typist. The Station people have been most cooperative in assisting Mr. Freeman getting organized as well as assisting in fiscal and personnel matters. As in the Amherst, Massachusetts Zone, we do not have a Pathologist in the Delaware, Ohio Zone.

The Milwaukee Zone Leader is Mr. L. H. Moore. His staff includes five Entomologists, one Blister Rust Control Forester and one Clerk-Typist. Plans are for Mr. Moore to be transferred into the Area Office in Upper Darby, Pennsylvania, as Chief of the Branch of Pathology. Mr. Dale VanDenburg will take over as Zone Leader. The States administered by the Zone are Minnesota, Wisconsin, Michigan, and Iowa. Mr. Charles E. Cordell, Zone Pathologist, recently transferred to the Southeastern Area with headquarters in Asheville, North Carolina. The Milwaukee Zone office will eventually be moved to St. Paul, Minnesota.

As to our field blister rust control personnel, we have also had quite a change. On December 30, 1965, Mr. Delbert Gillespie resigned from the Federal service and became a full time employee of the West Virginia Department of Agriculture. Delbert still heads up blister rust control in the State. Mr. Clarence Fultz also resigned as of December 30, 1965. We were sorry to see Clarence leave since besides handling a blister rust district in West Virginia, he also coordinated the blister rust work in western Maryland. However, besides attending to his large land holdings, cattle, gas wells, and what not, Clarence still can't leave blister rust and is working on an hourly part time basis with the State of West Virginia.

In Pennsylvania, Marco DiBerti retired as Blister Rust Control District Leader. Marco said he has not taken one Malox tablet since he retired. Marco has built up a good little business for himself as a consulting forester. He cruises timber, contracts for spray jobs, and other things. He bought a new station wagon and has his business advertised on it from stem to stern.

Mr. Richard P. Fatzinger also retired on December 30, 1965. Dick was in charge of blister rust control in the central and eastern part of Pennsylvania. Dick joined up with the Pennsylvania Department of Forests and Waters and is now in charge of blister rust control for the entire State. Who can be more faithful than old BRC boys? Dick is assisted by two State District Leaders, Mr. George Senotti and Mr. W. D. Davies. Mr. Ted Rodamer, Blister Rust District Leader in Virginia, transferred to Region 8, in charge of blister rust control on the George Washington National Forest. Mr. Noah Plaugher, Forestry Aid, also transferred to Region 8 and will work with Rodamer on blister rust and oak wilt control.

Mr. Martin Q. Miller, Blister Rust District Leader in southwestern Virginia is employed by the Jefferson National Forest on land surveys.

Mr. John Rauschenberger, Southern Zone Entomologist, transferred to the Southeastern Area and is working for Mr. Ciesla in Asheville, North Carolina. Mr. Robert L. Talerico transferred to the West Haven Laboratory of the Northeastern Forest Experiment Station.

Mr. T. Craig Weidensaul has taken leave without pay to pursue graduate studies at Penn State, State College, Pennsylvania. Craig is also working on a research project involving maple canker. We hope Craig will be coming back with us after his leave expires. We certainly need pathologists.

The Administrative Assistant position held by Mrs. Joe Ann Martin in our Southern Zone was abolished as of June 30. Joe Ann was an excellent administrative assistant. She is now employed by the Jefferson National Forest in Virginia.

Mr. Jacob N. Licke, Area Leader for Minnesota, retired in February 1965, after more than 30 years of Federal service. Jake is now village clerk for Walker, Minnesota.

There has been little change in the States' Blister Rust Control organization.

Maine: Now has full responsibility for the operation and supervision of their BRC program and has three permanent State Blister Rust Control Leaders. Mr. Marty Calderara, Federal Blister Rust Control Leader, coordinates BRC activity between the Districts and provides technical assistance to R. W. Nash, who directs the program. Mr. H. G. Bradbury, Federal District Leader, stationed in Belfast retired on December 1965.

New Hampshire: Has seven permanent Blister Rust Control Leaders operating under the direction of Mr. Tom King, Pest Control Chief.

Vermont: Mr. Huntly Palmer, Federal BRC District Leader retired on December 1965. The blister rust control program in Vermont is now under the general administration of Mr. E. B. Walker, Assistant-in-Charge of Pest Control. Mr. E. F. Leysath, District Supervisor, directs the program in the southern part of the State. As yet no district supervisor has been appointed to the northern half of the State. The State is divided into four pest control districts.

Massachusetts: Mr. Van Ness Lilly, Federal District Leader, directs the blister rust operations in the State. The State provides two full-time men, who work under the direction of the Federal District Leader, and also provides several seasonal men during the ribes eradication season.

Connecticut: All blister rust work in Connecticut is handled through Mr. Neely Turner of the Connecticut Agricultural Experiment Station. Mr. Alton Miller handles all the field work. Technical assistance is offered by the Zone Leader and Mr. F. U. Sievers, BRC Area Leader.

Pennsylvania: Mr. R. P. Fatzinger, now a state employee, heads up blister rust control in the State. He is assisted by two district leaders. Mr. Fatzinger's immediate supervisor is Mr. S. C. Cobb, in charge of forest protection for the Department of Forests and Waters. Sam has recently been appointed State Forester following the retirement of Mr. Wible.

Maryland: Blister rust control in Maryland is under the administration of Mr. H. C. Buckingham, State Forester. Technical supervision of the program is by the District Forester, Mr. Tunis Lyon. Field supervision and direction is by Assistant District Forester, Mr. Paul Mateer and Mr. Al Stafford, Foreman.

West Virginia: Mr. F. Waldo Craig, Director Pest Control Services for the West Virginia Department of Agriculture, administers the blister rust program in the State. He is ably assisted by Mr. W. H. Gillespie, Assistant Director Pest Control Services, and State BRC Area Leader, Delbert Gillispie and District Leader, Dana Keaton.

All blister rust control work in the Milwaukee Zone is directed by Mr. S. Daryl Adams. Most of the active BRC work in the Zone is in Minnesota, Wisconsin and Michigan on National Forest lands, Indian lands, and on state and private lands. Control work on non-Federal land is conducted by the State Departments of Agriculture. High rust hazard conditions prevail in these three Lake States.

Michigan: The control program is under the general supervision of L. J. Gardner, Regional Supervisor for the northern part of the State. Norman W. Remington is in charge of the field work. He is assisted by A. J. Verville and D. W. Mattson.

Minnesota: Stanley E. Bilben heads up the field activities. He has one field assistant.

Wisconsin: Kenneth P. Robert directs the State's control program. He is assisted by Area Supervisors Andrew W. Depta, George F. Lehrer, Harold F. Williams and four field assistants.

Cooperation

Cooperation with the various State organizations administering the blister rust control program has been very good. The 1965 Fiscal Year report showed all but one of the old Region 7 cooperating States as having one or more federal blister rust district leaders assisting the States in planning and directing the program. Since the retirement or transfer of all our blister rust district leaders in the Southern Zone, and the retirement of Palmer and Bradbury in the Northern Zone, we now have, besides New Hampshire, the States of Maine, Connecticut, Vermont, Pennsylvania, Maryland, West Virginia, Michigan, Minnesota and Wisconsin, administering their own program. Until our newly established Delaware Zone is completely organized, and a pathologist is employed, technical assistance in the latter three States will be furnished from the Area Office. Following is a list of the cooperating State Agencies and key personnel in the Northeastern Area:

State	Cooperating Agency
*(Maine)	Maine Forest Service Austin H. Wilkins, Commissioner R. W. Nash-State Entomologist, In charge of BR program through State
*(New Hampshire)	Division of Resources Development William H. Messeck, Jr., Director T. J. King, Chief, Forest Pest Control
*(Vermont)	Department of Forests and Parks Albert W. Gottlieb, Director of Forests E. B. Walker, Entomologist
***Massachusetts	Division of Forests and Parks Francis Mahoney, Director C. S. Hood, Chief, Bureau of Insect Pest Control
*(Connecticut)	Connecticut Agricultural Experiment Station Neely Turner, State Entomologist A. V. Miller, District Leader

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* State and Town participation
*** Statewide
( ) States fully administering BRC program-Technical assistance and direction of program given by FPC Zone personnel.

State (Cont.)	Cooperating Agency (Cont.)
**New York	Division of Lands and Forests N. Y. State Conservation Department William D. Mulholland, Director C. J. Yops, Superintendent, Bureau of Forest Pest Control
***(Pennsylvania)	Department of Forests and Waters S. C. Cobb, State Forester Eugene F. McNamara, Chief, Division of Forest Protection R. P. Fatzinger, Entomologist, Forest Protection
***(Maryland)	Department of Forests and Parks H. C. Buckingham, State Forester Tunis Lyon, District Forester Paul Mateer, Asst. District Forester
***(West Virginia)	Department of Agriculture F. Waldo Craig, Director, Pest Control Services W. H. Gillespie, Asst. Director, Pest Control Services
***(Michigan)	Department of Agriculture B. Dale Ball, Director, Plant Industry Division C. A. Boyer, Chief
***(Minnesota)	Department of Agriculture Russell G. Schwandt, Commissioner Division of Plant Industry Donald M. Coe, Director
***(Wisconsin)	Department of Agriculture P. N. McDowell, Director, Division of Plant Industry A. R. Kurtz, Chief

**State and County Participation

***Statewide

( ) States fully administering Blister Rust Control program - Technical assistance and direction of program given by FPC Zone personnel.

On National Forest lands, blister rust control work is the responsibility of the Forest Supervisor, with technical direction being offered through the Zone. Except in the case of the Monongahela National Forest in West Virginia, blister rust control work is done by laborers, and supervision furnished by the Forests. Work on the Monongahela is done by State crews with the State being reimbursed for the work accomplished.

On Department of the Interior lands, such as National Parks and Historical Monuments, blister rust control is handled directly by the National Park Service. On Indian lands work is conducted by the Bureau of Indian Affairs. Leadership and technical direction is furnished by the zone personnel of the U. S. Forest Service.

Status of Blister Rust Control

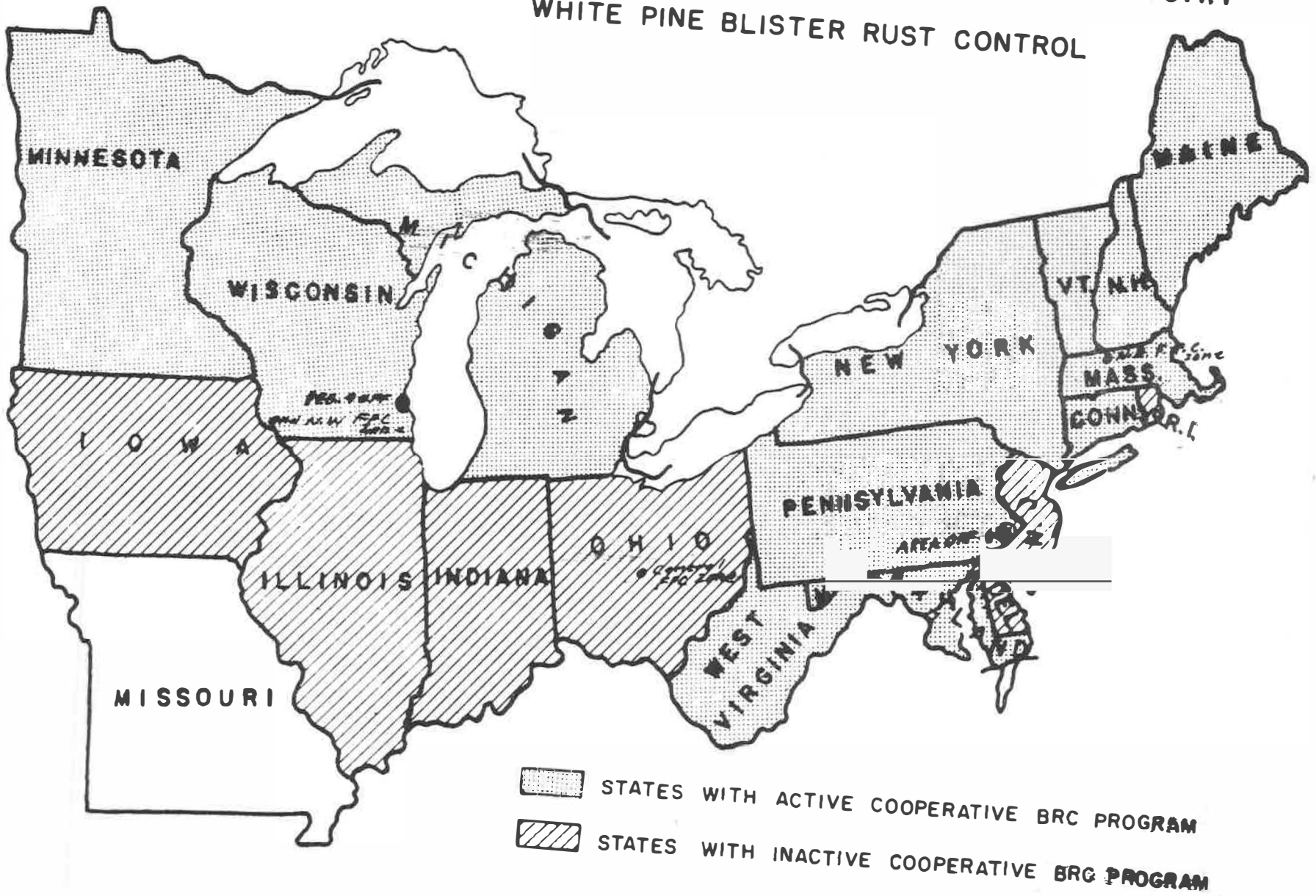
Of the 20 States making up the Northeastern Area, 19 have participated in blister rust control. Following the completion of white pine and ribes surveys, cultivated ribes eradication, extensive nursery sanitation and recommended adjustments in quarantine regulations relative to the growing and movement of white pine and ribes, seven States were found to have no need for further control work. Many of these States have white pine growing in extremely low rust hazard areas, pine too scattered to meet control standards or pine growing in ribes - free areas. The remaining 12 States have an active cooperative blister rust control program with the U. S. Forest Service. These States are Connecticut, Maine, Maryland, Vermont, Michigan, Massachusetts, New Hampshire, New York, Pennsylvania, Minnesota, West Virginia, and Wisconsin. See area map on following page.

These 12 States, including all land ownership, report 5,304,423 acres of white pine within the control area. The control acreage (white pine plus protection zone) is 12,873,011 acres. Of this acreage 11,271,374 acres is on maintenance.

Gradually, more attention is being given to the economic aspects of blister rust control by conducting evaluation studies to determine the profitability of control, the reduction of protection zone boundaries especially in low rust hazard areas and the readjustment of control acreage figures (carried for years on the status tables) in States where control work is no longer needed. Except in very high rust hazard areas we find that the old 900 ft. protection zone is not needed. By gradually adjusting the control acreage figures, a more reasonable relation will be brought about between white pine and protection zone acreage figures.

NORTHEASTERN AREA—STATE & PRIVATE FORESTRY

WHITE PINE BLISTER RUST CONTROL



We also feel that in all of the States with an active cooperative control program, more acreage, now placed on maintenance, can be claimed as needing no further work. Reporting large acreages for periodic maintenance examination without considering control area evaluation surveys is no longer impressive. We, therefore, are stressing the use of our new tool - the control area evaluation survey, to be conducted on areas slated for examination. For a number of years the Lake States have been making control area and rust hazard evaluation surveys to appraise individual white pine stands.

Table I shows the status of control on state and private, national forest, national park and Indian lands on the 12 States with an active control program as well as 4 States without an active program. Indiana, Ohio and Rhode Island are not included since status surveys made in 1966 revealed no need to retain the old status figures in these States due to change in pine conditions, old obsolete control area boundaries, few or no ribes and little or no infection. The remaining four States where there has been no program for many years will also have status surveys performed in 1967 and 1968. The white pine acreage has increased by 47,168 acres and the control acreage by 66,433 since the last report. Acreage placed on maintenance is now 11,318,754 which is a decrease of 8 percent. Acreage now claimed as needing no further working is 2,454,260 or 22 percent of the total control acreage.

More pathological pruning is being done to protect white pine crop trees from blister rust in high rust hazard zones. Table II shows pathological pruning accomplishments in Fiscal Year 1966.

Blister Rust Control Accomplishments - Fiscal Year 1966

Area Summary

Blister rust control accomplishments during F. Y. 1966 are briefly summarized below. (See Table II)

In the Northeastern Area, premaintenance ribes eradication work shows total of 56,417 acres initially worked and 22,232 acres reworked. Maintenance work was done on 53,696 acres. On pathological pruning and excising 3913 acres were worked, treating over 545,000 trees. Pruning and excising work were done in high rust hazard areas in Michigan, Minnesota, New York and Wisconsin. Surveys, including pine area examination, mapping, checking, control area evaluation, rust hazard appraisals, etc., covered 1,617,861 gross acres using 4235 man days. Most of the control work on National Forest lands and other federal lands was done in Minnesota, Michigan and Wisconsin. Of the total acreage worked including surveys in the area 94.4 percent was on state and private lands, 3.3 percent on national forest lands and 2.3 percent on Indian lands.

Total acres worked (ribes eradication and pathological pruning) on premaintenance and maintenance on all lands was 136,258. Man days expended 21,124. This was an average coverage of 6.5 acres per man day. On surveys 1,617,861 gross acres were covered using 12,720 man days. This was a survey coverage of 127 acres per man day. Average cost per acre for all work (ribes eradication, pathological pruning and surveys) was 0.60¢. This cost is based on total program expenditures, which include administration, technical services and suppression.

Financing

The white pine blister rust control program operates under signed agreements between the U. S. Forest Service and the cooperating agencies. Final allotments are made to the states only after financial plans are approved and signed. Funds for conducting blister rust control on national forest lands are allotted directly to the forests. Work on the Monongahela National Forest is done by the West Virginia Department of Agriculture. Funds for work on this Forest are included in the State's BRC financial plan. The State is reimbursed by the Forest Service.

Our share of the costs include matching funds and non-matching funds. The latter includes a prorated portion of Area, Zone and District costs to administer the BRC program. During the year it is usually necessary to adjust the financial plans by submitting modifications to the plan. This may be brought about by increasing the federal share to the states through the resignation or retirement of district leaders, a lateral adjustment from administrative to field and other reasons.

The final cost figures for Fiscal Year 1966 were somewhat difficult to arrive at, mainly, because of organizational changes. Some misunderstanding as to proper functional coding caused considerable adjustments to be made between functions.

Direct Treatment of White Pines

There is still nothing new relative to controlling white pine blister rust on eastern white pine by the use of antibiotics. Reports of studies made by Messrs. Phelps and Weber in the Lake States are not encouraging.

Pathological pruning, however, seems to have some merit in high rust hazard areas where ribes eradication is costly, and long range infection spread is common. However, such control measures are only effective in areas where the target of infection is low. By pruning off the lower limbs it is hoped that enough trees will come through to make a commercial stand. Usually only selected potential crop trees are pruned. In New York State, pathological pruning is on an experimental basis only. Dr. S. B. Silverborg of New York State College in Syracuse and BRC Leader F. U. Sievers have established a number of plots to study the effectiveness of blister rust control through low pruning. In Minnesota, Michigan and Wisconsin, pathological pruning operations are now considered part of the regular control work. During the Fiscal Year over 545,000 trees were treated on 3,913 acres using 5734 man days. Of the total number of trees treated 60 percent were in Michigan.

Labor

Some difficulty was encountered in several states hiring labor on force account during the ribes eradication season. This difficulty was mainly due to the differential in pay scales between commercial employment, certain state agencies and the U. S. Forest Service. The only contract work was done on the LacCourt Oreilles and Lac du Flambeau Indian Reservations in Wisconsin.

Nursery Sanitation

Scheduling of nursery sanitation work varies considerably in the States of the Amherst Zone as follows:

Maine - Work will be done annually at the Greenbush State Nursery until no ribes are found and thereafter will be worked every other year.
New Hampshire - State nursery examined every three years. Not scheduled this year.
Vermont - Examined every other year. Was examined in July 1965.
Massachusetts - Examined every other year. Were examined the spring of 1965.
Connecticut - No information available.
New York - Nursery sanitation zones examined annually.

Very few commercial nurseries grow white pine in the northeast. Most white pine is grown in state nurseries. Thus, nursery sanitation is concentrated on the state nurseries. The Western Maine Forest Nursery, Fryeburg, Maine, is the largest commercial grower of white pine and the sanitation zone at this Nursery is examined for ribes periodically by the State BRC personnel.

Herbicide Tests

Our main hope is to find a herbicide in pellet or granular form to replace or supplement the use of 2,4,5-T in oil. So much of our area is now on maintenance that the main ribes eradication problem is treating scattered ribes bushes. In this respect the ease of handling and transporting pellets or granules is much greater than toting spray tanks, chemicals, water and fuel oil through the woods. It is also less messy.

During the Fiscal Year more tests have been made using Dow herbicide Tordon 22K, Tordon 101 and Banvel-D granules. The latter is manufactured by the Velsicol Chemical Corporation, Chicago, Illinois. Active ingredients are 2-methoxy-3, 6-dichlorobenzoic acid (Dimethylamine salt - 49.0%; and Dimethylamine salts of related acids - 7.9%). Inert ingredients make up 43.1% of the total.

Field tests of Tordon 22K and Tordon 101 at increased dosages were continued in 1966, and look very promising. Preliminary observations on tests made using Banvel-D granules also show promise. When all reports are in after the 1967 field season results will be analyzed and a report submitted. In Maryland, Dow 22K and Dow 101 and Banvel-D plots were examined last June in Garrett County. The foliar treatment on large R. Cynosbati using 22K showed a near 100% kill. The basal treatment was practically negative. Foliar spray using Dow 101 showed good results but not as effective as 22K. Basal treatment was no better than using 22K. The .2 acre Banvel-D plot which was treated in July 1965 still looks good. Of the 161 bushes treated only one small sprout and two seedlings were found. All these bushes were treated with Banvel-D granules.

Marty Calderara reported good results using Tordon 22K and 101 as a foliar spray. It is recommended that more testing be done using these herbicides as a basal treatment. We feel that by adjusting the formulation of Tordon 101 we will be able to obtain as good results as we have with Tordon 22K. Also Tordon 101 is much less expensive than 22K.

Development of Blister Rust Resistant

Eastern White Pine

It was good to learn that the program to develop rust resistant white pine has been progressing according to schedule. The Division of Timber Management, Region 9, is heading up this program in cooperation with the North Central Experiment Station, the University of Wisconsin and the Departments of Agriculture and Conservation in the three Lake States.

We expressed our willingness to cooperate by having the blister rust control leaders, as well as others connected with Forest Insect and Disease Control work, assist in the selection of candidate white pine trees. The second progress report issued in August by Mr. Paul J. St. Amant, Assistant Regional Forester, Division of Timber Management, shows that 236 resistant candidate trees have been accepted out of 478 selections. The third progress report will be issued in December 1966.

Checking

In many states we are falling behind in making efficiency checks following ribes eradication. In Michigan, Minnesota and Wisconsin on 64,927 acres worked, 8500 acres had efficiency checks. This indicates a very good coverage. Even though most of the district leaders are holding close to the required percentage of checks to be made as indicated in the BRC Handbook, it is felt that the standard set is too low. The revised handbook will provide for revisions in checking procedures, especially for those states falling in old Region 7.

Control Area Evaluation

Guides and field forms were extensively tested during the year on the economic control evaluation of white pine areas. In a few states the control area evaluation survey is now being used in determining the profitability of performing control work now, delaying control for several years or discontinuing all further work. More training sessions are needed for this survey. Some revisions of the field form will also be made as well as the field guidelines. We hope that Dr. Robert Marty will be able to assist us in this. The "Economic Guides for Blister Rust Control in the East" by Robert Marty has been recently issued as U. S. Forest Service Research paper NE-45. Copies of this paper have been issued to the field. We have found that it would help a great deal if the graphs could be revised so that they are more easily read by the evaluators. This will be taken up with Bob Marty. As stated earlier in this report the Lake States have been using a similar economic guide for evaluating white pine areas to determine the profitability of conducting blister rust control.

Information and Education

Now that many states are assuming full responsibility in administering the blister rust control program, it is hoped that these states will issue informative media in one form or another to keep the public well informed as to the value of white pine in the states and the progress made in the control of blister rust. We will be glad to cooperate with the states in this matter. Recently the Wisconsin State Department of Agriculture in cooperation with the U. S. Forest Service published an excellent paper titled "White Pine ---The Green Gold of Wisconsin". Copies of this publication were sent to our Insect and Disease Control Zone offices for distribution to the states.

Conclusion

Under our new Area organization of State and Private Forestry, we hope to attain closer relation with our state cooperating agencies in all phases of insect and disease problems. Our Insect and Disease Control Zones are being more fully staffed to assist the states on detection, evaluation, prevention, and suppression of insect and disease pests. New problems are constantly arising and the close cooperation between the states and the U. S. Forest Service is essential to cope with these problems, which, in the end, are to the benefit of all concerned.

The success in controlling the white pine blister rust disease has certainly proved that close cooperation between the affected states and the Federal government over many years has paid off. We, therefore, close this Fiscal Year 1966 blister rust report in thanking all of our cooperators for their continuing interest, and generous financial support of the white pine blister rust control program.

TABLE 1

STATUS OF BLISTER RUST CONTROL BY OWNERSHIP CLASS IN THE NORTHEASTERN AREA - AS OF JUNE 30, 1966

State	Acres White Pine	Acres Control (W.P. + Prvt. Zone)	Acres Initially Worked	Percent Initially Worked	Acres on Maint.	Percent on Maint.	Acres Pre-Maint. Work Remaining Initial	Acres Pre-Maint. Work Remaining Rework	Acres No Further Worked
				Work Done on State and Private Lands					
Conn.	110,275	469,520	468,744	99	468,744	99	776	-	326,185
Del.	242	6,186	6,186	100	6,186	100	-	-	6,186
Ind.	-	-	-	-	-	-	-	-	-
Iowa	2,027	10,540	10,540	100	10,540	100	-	-	-
Ill.	3,458	13,912	13,912	100	13,912	100	-	-	-
Maine	946,457	2,063,969	2,029,075	98	1,910,741	92	34,894	118,334	163,587
Md.	77,142	187,186	184,583	98	152,474	81	2,603	32,109	54,553
Mass.	573,849	1,378,720	1,378,635	99	1,357,943	98	85	20,692	1,124,179
Mich.	370,372	812,531	659,403	81	409,688	50	153,128	249,715	-
Minn.	63,861	123,231	96,818	79	67,872	55	26,413	28,946	-
N. H.	1,257,669	2,345,515	2,345,515	100	2,315,188	98	-	30,327	346,634
N. J.	3,771	16,742	16,742	100	16,742	100	-	-	16,742
N. Y.	689,593	1,941,957	1,911,022	-	1,798,763	99	30,935	112,259	288,987
Ohio	-	-	-	-	-	-	-	-	-
Penna.	106,615	463,528	456,061	98	439,086	94	7,467	16,975	30,012
R. I.	-	-	-	-	-	-	-	-	-
Vt.	182,224	624,020	562,907	90	557,692	89	61,113	5,215	48,354
W. Va.	235,237	432,235	429,320	99	404,885	93	2,915	24,435	48,601
Wisc.	468,545	1,586,448	1,451,686	92	968,853	61	134,762	482,833	-
Total	5,091,337	12,476,240	12,021,149	96	10,899,309	87	455,091	1,121,840	2,454,020

TABLE 1 (Continued)

STATUS OF BLISTER RUST CONTROL BY OWNERSHIP CLASS IN THE NORTHEASTERN AREA - AS OF JUNE 30, 1966

Administrative Unit	Acres White Pine	Acres Control (W.P. + Fyt.Zone)	Acres Initially Worked	Percent Initially Worked	Acres on Maint.	Percent on Maint.	Acres Pre-Maint. Work Remaining: Initial	Rework	Acres No Further Worked
Work Done on National Forest Lands									
White Mtn. Me.	1,753	3,371	3,371	100	3,371	100	-	-	-
White Mtn. N.H.	1,213	2,194	2,194	100	2,194	100	-	-	-
White Mtn. Total	2,966	5,565	5,565	100	5,565	100	-	-	-
Huron-Manisteen, Mich.	34,238	88,990	86,260	97	84,100	95	2,730	2,160	-
Hiawatha, Mich.	22,942	49,657	49,187	99	48,282	97	470	905	-
Ottawa, Mich.	11,270	20,998	20,998	100	18,430	88	-	2,568	-
Total Mich.	68,450	159,645	156,445	98	150,812	95	3,200	5,633	-
Chippewa, Minn.	4,255	7,788	7,160	92	6,565	84	628	595	-
Superior, Minn.	13,357	18,113	18,113	100	18,111	100	-	-	-
Total Minn.	17,612	25,901	25,273	98	24,676	95	628	595	-
Allegheny, Penna.	1,047	4,525	4,525	100	4,475	98	-	50	240
Monongahela, W.Va.	49,777	90,919	90,919	100	89,029	98	-	1,890	-
Green Mtn., Vt.	448	1,653	1,653	100	1,653	100	-	-	-
Chequamegon, Wisc.	13,571	23,468	23,468	100	20,273	86	-	3,195	-
Nicolet, Wisc.	6,289	13,696	13,696	100	13,696	100	-	-	-
Total Wisc.	19,860	37,164	37,164	100	33,969	91	-	3,195	-
Total	160,160	325,372	321,544	98	310,179	95	3,828	11,363	240
Work Done on National Park Lands									
Acadia N.P. - Me.	3,500	17,318	17,318	100	17,318	100	-	-	-
Saratoga Battlefield, N.Y.	145	1,550	1,550	100	1,550	100	-	-	-
Hyde Park, N.Y.	12	105	105	100	105	100	-	-	-
Total National Pks.	3,657	18,973	18,973	100	18,973	100	-	-	-

TABLE 1 (Continued)

STATUS OF BLISTER RUST CONTROL BY OWNERSHIP CLASS IN THE NORTHEASTERN AREA - AS OF JUNE 30, 1966

Administrative Unit	Acres White Pine	Acres Control (W.P. + Fyt.Zone	Acres Initially Worked	Percent Initially Worked	Acres on Maint.	Percent on Maint.	Acres Pre-Maint. Work Remaining: Initial	Acres Pre-Maint. Work Remaining: Rework	Acres No Further Worked
Work on Indian Lands									
Leech Lk. -Minn.	907	1,370	1,370	100	1,370	100	-	-	-
Nett Lk. -Minn.	4,890	6,695	6,695	100	6,695	100	-		-
Vermillion -Minn.	78	186	186	100	186	100	-		-
White Earth-Minn.	664	1,350	1,350	100	1,350	100	-		-
Red Lk. -Minn.	13,972	19,688	19,688	100	16,078	82	-	3,610	-
Total -Minn.	20,511	29,289	29,289	100	25,679	88	-	3,610	-
Bad River -Wisc.	8,547	15,023	14,846	99	13,590	90	177	1,256	-
Lac Court-Oreilles -Wisc.	15,292	28,790	26,230	91	24,318	84	2,560	1,912	-
Lac du-Flambeau -Wisc.	14,387	26,704	26,704	100	26,704	100	-	-	-
Total -Wisc.	38,226	70,517	67,780	96	64,612	92	2,737	3,168	-
Total-Indian Lands	58,737	99,806	97,069	97	90,291	90	2,737	6,778	-
All Work Done in Northeastern Area									
All Administrative Units.	5,313,891	12,920,391	12,458,735	97	11,318,752	88	461,656	1,139,981	2,454,260

TABLE II

SUMMARY OF RIBES ERADICATION, PRUNING AND EXCISING AND SURVEY WORK IN NORTHEASTERN AREA - F. Y. 1966

Administrative Unit	Acres Worked (Ribes Eradication)				Man Days	Pruning and Excising			Thousand Acres of Ribes Destroyed	Acres Surveyed	Survey Man-Days
	Initial	Rework	Maint.	Total	Erad.	Acres	Trees Treated	Man-Days			
	Work on State and Private Lands										
Connecticut	-	-	4,242	4,242	160	-	-	-	31	51,393	269
Maine	105	255	1,014	1,374	656	-	-	-	200	271,292	2,570
Maryland	900	2,899	-	3,799	781	-	-	-	107	1,373	18
Massachusetts	5	11	270	286	111	-	-	-	7	51,494	623
Michigan	6,966	5,215	4,860	17,041	703	1,512	223M	2,934	139	100,961	280
Minnesota	979	325	221	1,525	1,637	746	112M	1,237	162	1,898	41
New Hampshire	-	75	574	649	219	-	-	-	204	360,762	2,737
New York	7,835	5,613	18,029	31,477	2,856	281	9M	228	503	419,295	4,235
Pennsylvania	3,045	240	360	3,645	341	-	-	-	99	99,172	269
Vermont	1,864	382	2,006	4,252	426	-	-	-	63	89,175	367
West Virginia	418	1,947	13,841	16,206	1,273	-	-	-	61	53,135	406
Wisconsin	31,924	4,216	5,105	41,245	4,738	203	54M	591	823	76,585	428
Total S&PF Lands	54,041	21,178	50,522	125,741	13,901	2,742	398M	4,990	2,399	1,576,535	12,243
	Work on National Forest Lands										
Monongahela W.Va.	60	239	1,189	1,488	121	-	-	-	4	6,259	87
Chippewa Minn.	-	-	28	28	18	481	79M	310	1	1,807	7
Superior Minn.	-	-	-	-	-	-	-	-	-	9,257	62
Chequamegon Wisc.	-	395	-	395	219	-	-	-	20	1,251	15
Nicolet Wisc.	-	-	-	-	-	-	-	-	-	915	3
Ottawa Mich.	-	-	-	-	-	-	-	-	-	-	-
Hiawatha Mich.	645	380	470	1,495	190	690	68M	434	23	8,224	37
Hur-Manistee Mich.	-	-	-	-	-	-	-	-	-	10,410	70
Total N.F.Lands	705	1,014	1,687	3,406	548	1,171	147M	744	48	38,123	281

TABLE II (Continued)

SUMMARY OF RIBES ERADICATION, PRUNING AND EXCISING AND SURVEY WORK IN NORTHEASTERN AREA - F. Y. 1966

Administrative Unit	Acres Worked (Ribes Eradication)				Man-Days Erad.	Pruning and Excising			Thousand of Ribes Destroyed	Acres Surveyed	Survey Man-Days
	Initial	Rework	Maint.	Total		Acres	Trees Treated	Man-Days			
Work on Indian Reservations											
Red Lake, Minn.	1,128	40	-	1,168	510	-	-	-	20	1,780	44
Bad River, Wisc.	-	-	-	-	-	-	-	-	-	4,099	81
Lac du-Flambeau, Wisc.	543	-	447	990	207	-	-	-	20	1,327	6
Lac Court-Oreilles, Wisc.	-	-	1,040	1,040	224	-	-	-	197	617	10
Tot. Indian Lands:	1,671	40	1,487	3,198	941	-	-	-	237	7,823	141
Work on National Park Lands											
Acadia N.F., Me.	-	-	-	-	[illegible]	-	-	-	(196)[1]	3,200	55
TOTAL ALL LANDS	56,417	22,232	53,696	132,345	15,390	3,913	545M	5,734	2,684	1,625,681	12,730

(196)[1] Actual number of ribes eradicated.